



Debris CLEANER

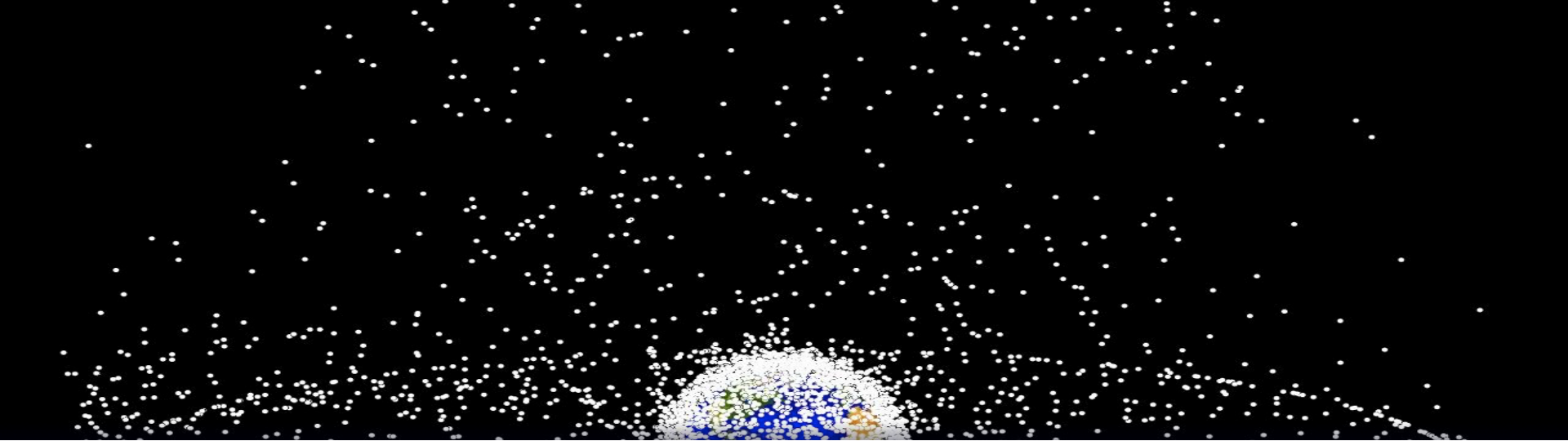
... our idea to change the universe to a cleaner place

Hello!

*We are young Students
from the HTL Eisenstadt -
Department Aeronautical
Engineering*



FLUGTECHNIK



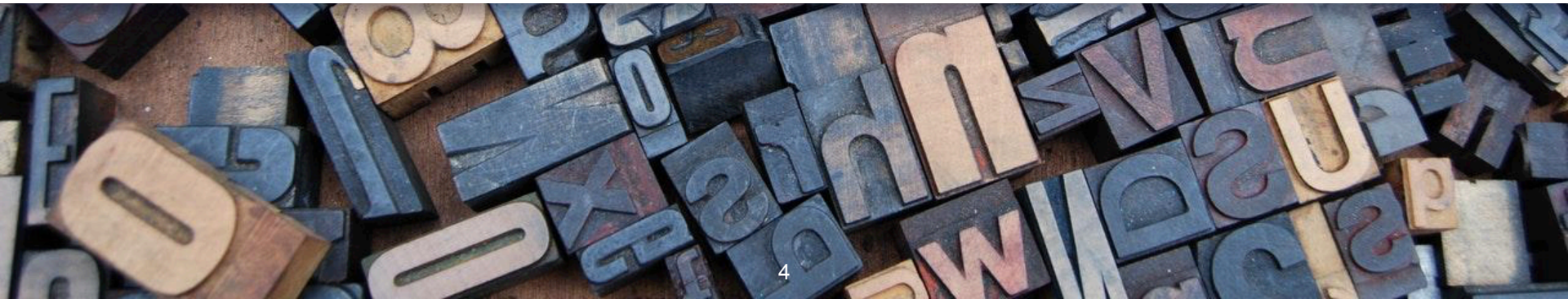
Remove defunct satellites

Let's start with the problem

“

*The only way to solve this problem is to bring
back the larger [space] objects.*

- Daniel Kessler, Huffingtonpost 2013



D-CLEANER

... a fishing net for space!



Version 1.0 of D - CLEANER



- Located in LEO
- Emergency system after space collision
- Is usable as a 24/7 collector with given infrastructure in space
- In the near future - Orbitports

Comparison of two possible rockets



Ariane 5



Falcon 9



Spaceports which could be used



Let's have a look to some ESA clean space initiatives



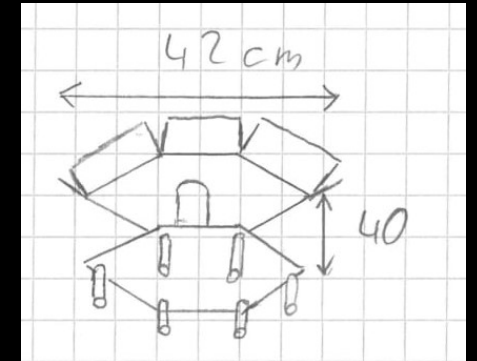
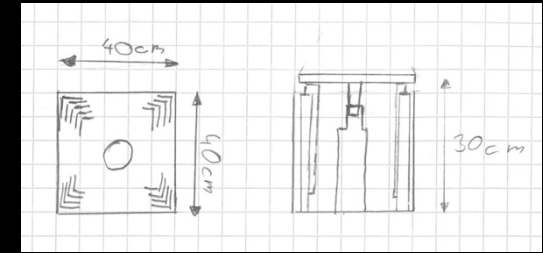
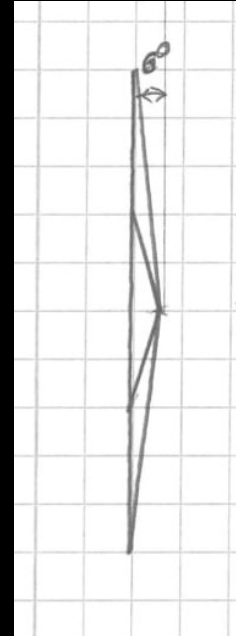
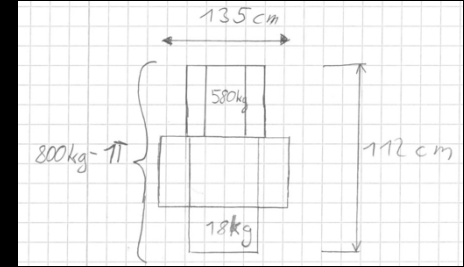
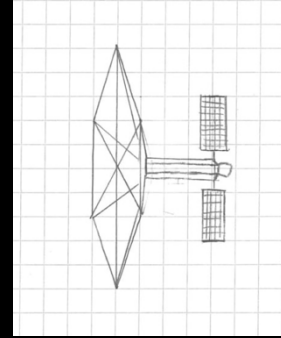
Design for servicing

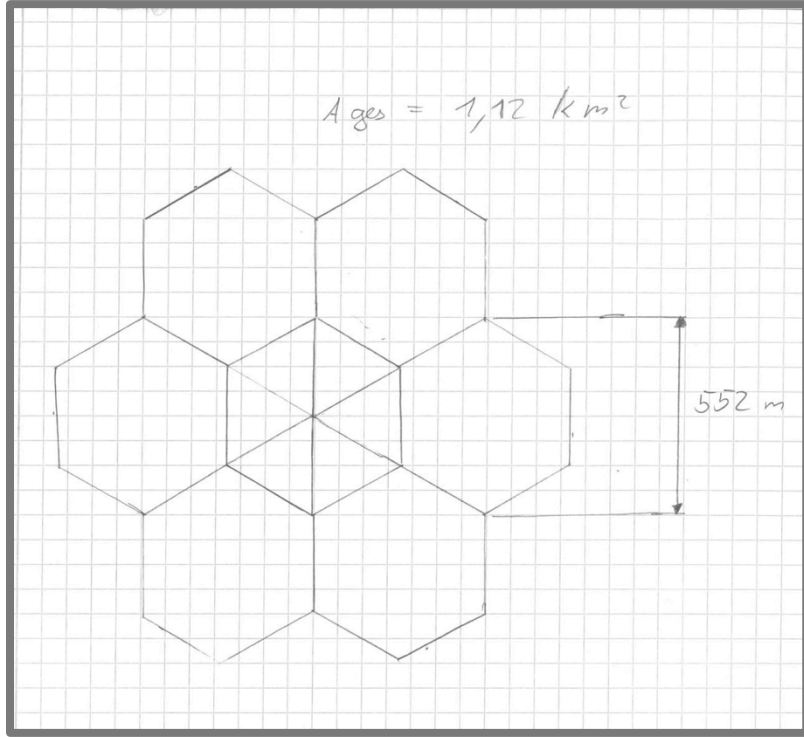
Deorbit

**Rondevou
x**

**Design for
demise**

First hand drawings





6 tons

Estimate weight per D-Cleaner

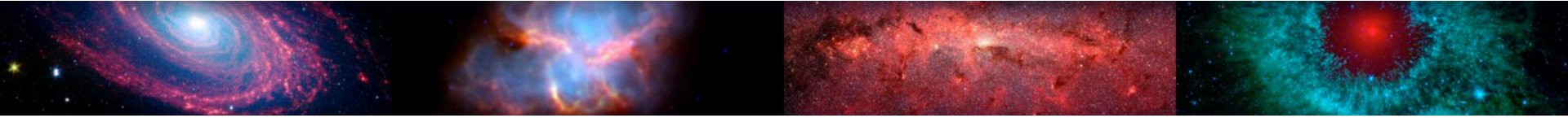
7


D-Cleaner per Orbit

1.12 km²

Covered surface per Orbit

Mode of operation



- Danger zone 
- Catch space debris
- Deorbit catcher and debris
- Future Orbitport

Time table



Developing D-Cleaner

Planned extension with Orbitports

First estimated launch
2025

D-Cleaner

... cleanUP the universe



Sources



HTL - Eisenstadt - <http://www.htl-eisenstadt.at/de-de/>

Wikimedia Commons - <https://commons.wikimedia.org/>

Google Maps - <http://maps.google.com>

Ariane Space - <http://www.arianespace.com>

SpaceX - <https://www.spacex.com/>

Enpulsion - <https://www.enpulsion.com/>

ESA - <http://www.esa.int/ESA>

All used pictures were marked as freely usable (CC-BY licence)